

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims

30. (currently amended) A method for controlling an emission system, the system having an engine and an exhaust through which exhaust gasses flow, said exhaust having at least a first and second catalyst arranged in parallel adapted for reducing NOx emissions with incoming reductants, and said exhaust also having at least one reductant delivery device, said reductant delivery device located downstream of the engine, the method comprising:

operating in a first mode where exhaust gasses flow to said first catalyst, and during at least a first interval while in said first mode, providing reductant from the reductant delivery device into the exhaust system that reaches said second catalyst to reduce NOx in said second catalyst; and

operating in a second mode where exhaust gasses flow to said second catalyst, and during at least a second interval while in said second mode, providing reductant from the reductant delivery device into the exhaust system that reaches said first catalyst to reduce NOx in said first catalyst, wherein the reductant injector delivery device is in the engine exhaust, and said first catalyst and said second catalyst have a differing characteristic capacity.

31. (cancelled).

32. (currently amended) The method of claim 4 30 wherein said engine is a diesel engine.

33. (currently amended) method for controlling an emission system, the system having an engine and an exhaust through which exhaust gasses flow, said exhaust having at least a first and second catalyst arranged in parallel adapted for reducing NOx emissions with incoming reductants, and said exhaust also having at least one reductant delivery device, said reductant delivery device located downstream of the engine, the method comprising:

when requested based on a first operating condition, operating in a first mode where exhaust gasses flow to said first catalyst at least partially along a first path, and during at least a first interval while in said first mode, providing reductant from the reductant delivery device into the exhaust system at least partially along a second path that reaches said second catalyst to reduce NOx in said second catalyst; and

when requested based on a second operating condition, operating in a second mode where exhaust gasses flow to said second catalyst at least partially along said second path, and during at least a second interval while in said second mode, providing reductant from the reductant delivery device into the exhaust system at least partially along said first path that reaches said first catalyst to reduce NOx in said first catalyst, wherein the reductant injector delivery device is in the engine exhaust.

34. (currently amended) The method of claim 4 33 wherein said first condition is a condition of said second catalyst.

35. (currently amended) The method of claim 5 34 wherein said first condition is an amount of NOx stored in said second catalyst.

36. (currently amended) The method of claim 4 33 wherein said second condition is a condition of said first catalyst.

37. (currently amended) The method of claim 7 36 wherein said second condition is an amount of NOx stored in said first catalyst.

38. (currently amended) The method of claim 4 33 wherein said reductant delivery device is coupled to a valve in the engine exhaust.

39. (currently amended) The method of claim 9 38 wherein said reductant delivery device is a diesel fuel injector.

40. (currently amended) A method for controlling an emission system, the system having an engine and an exhaust through which exhaust gasses flow, said exhaust having at least a first and second catalyst arranged in parallel capable of adapted for reducing NOx emissions with incoming reductants, and said exhaust also having at least one reductant delivery device, said reductant delivery device located downstream of the engine, the method comprising:

when requested based on a first operating condition, diverting at least a portion of exhaust gas flow from said second catalyst to a first path to said first catalyst and providing reductant from the reductant delivery device into a second path to said second catalyst in the exhaust system that reaches said second catalyst to reduce NOx in said second catalyst; and

when requested based on a second operating condition, diverting at least a portion of exhaust gas flow from said first catalyst to said second path and providing reductant from the reductant delivery device into said first path in the exhaust system that reaches said first catalyst to reduce NOx in said first catalyst, wherein the reductant delivery device is in the engine exhaust.

41. (currently amended) The method of claim 11 40 wherein all of the exhaust gas flow is diverted from the second catalyst when requested based on said first operating condition.

42. (currently amended) The method of claim 11 40 wherein all of the exhaust gas flow is diverted from the first catalyst when requested based on said second operating condition.

43. (currently amended) The method of claim ~~11~~ 40 wherein said reductant delivery device is a diesel fuel injector.

44. (currently amended) The method of claim ~~11~~ 40 wherein said first condition is a condition of said second catalyst.

45. (currently amended) The method of claim ~~15~~ 44 wherein said first condition is an amount of NOx stored in said second catalyst.

46. (currently amended) The method of claim ~~11~~ 40 wherein said second condition is a condition of said first catalyst.

47. (currently amended) The method of claim ~~17~~ 46 wherein said second condition is an amount of NOx stored in said first catalyst.

48. (currently amended) A method for controlling an emission system, the system having an engine and an exhaust through which exhaust gasses flow, said exhaust having at least a first and second catalyst arranged in parallel adapted for reducing NOx emissions with incoming reductants, and said exhaust also having at least one reductant delivery device, said reductant delivery device located downstream of the engine, the method comprising:

when requested based on a first operating condition, diverting at least a portion of exhaust gas flow from said second catalyst and providing reductant from the reductant delivery device into the exhaust system that reaches said second catalyst to reduce NOx in said second catalyst; and

when requested based on a second operating condition, diverting at least a portion of exhaust gas flow from said first catalyst and providing reductant from the reductant delivery device into the exhaust system that reaches said first catalyst to reduce NOx in said first catalyst, wherein the reductant delivery device is in the engine exhaust, The method of claim 11 wherein said reductant delivery device is coupled to an exhaust valve located in the exhaust that performs said diversion.

49. (new) The method of claim 40 wherein said reductant delivery device is a fuel injector.

50. (new) The method of claim 40 wherein said first catalyst and said second catalyst have a differing physical characteristic.

51. (new) The method of claim 48 wherein said reductant delivery device is a fuel injector.

52. (new) The method of claim 48 wherein said reductant delivery device is a diesel fuel injector.